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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/770,491	01/29/2001	Janne Kallio	59864 00527	7373

32294 7590 04/19/2006

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EXAMINER

D AGOSTA, STEPHEN M

ART UNIT	PAPER NUMBER
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2617

DATE MAILED: 04/19/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/770,491

Applicant(s)

KALLIO, JANNE

Examiner

Stephen M. D'Agosta

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 03 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 31-63 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 31-33, 35, 36, 38, 40, 42, 43, 45-47, 49, 50, 55, 56 and 58-60 is/are rejected.
- 7) ☒ Claim(s) 34, 37, 39, 41, 44, 48, 51-54, 57 and 61-63 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Response to Amendment***

Claims 1-30 have been cancelled. A new rejection for claims 31-63 is found attached.

***Specification***

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The recent amendment/RCE has significantly changed the scope of the claims such that the title is not fully descriptive of these new claims. The examiner believes a title that better captures the "new" scope is required. He suggests something using the concepts of:

1. Handoff/over
2. Using/storing cell identity information for a cell of the first telecommunication network using a cell identity information structure of a second telecommunication network.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 31-33, 35-36, 38, 40, 42-43, 45-47, 49-50, 55-56 and 58-60** rejected

under 35 U.S.C. 103(a) as being unpatentable over Ray et al. US 6,424,638 and further in view of Keski-Heikkilä et al. US 6,882,844.

As per **claims 31, 42, 49 and 55**, Ray teaches an apparatus for a first telecommunication network (Abstract teaches a mobile handing over between two different networks), the apparatus comprising:

a data store to store a cell identity information for a cell of the first telecommunication network (Figure 1, shows an HLR #26 and VLR #16),

to allow the cell of the first telecommunication network to be identified as a neighboring cell by a cell of the second telecommunication network (Abstract teaches serving and target MSC's which inherently infers a target BTS/cell which will support the mobile after handoff. The examiner notes that neighbor lists are well known in cellular networks and inherently include a list of BTS's the mobile can handoff to, depending upon their location and signal strength),

**but is silent on** using a cell identity information structure of a second telecommunication network.

The examiner notes that Ray teaches the need to translate protocols and data between the two networks:

With all of these different types of wireless communications systems available, seamless roaming from one type of system to another has posed significant problems for the industry. For example, if a mobile subscriber is involved in a wireless call,

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and the call needs to be handed over to another type of system in order to continue the call, conversion and interface devices are needed to perform this task. One device that exists today to perform such handovers between D-AMPS and GSM systems is a Roam-Free Gateway (RFG), formerly known as an Interworking Location Register (ILR). The RFG acts as a gateway that converts the protocols of the signaling and voice communications between the systems to enable the two systems to communicate effectively in order to perform call handovers. (Cxx, Lxx)

**Detailed Description Text - DETX (14):**

Therefore, in accordance with aspects of the present invention, the currently serving GSM MSC 14a sends an identity message 315, including location information 318, e.g., X, Y coordinates and preferably a coverage area radius, for the GSM base station 25a, to an Internet Gatekeeper 320 via an Internet Gateway 310a for the GSM system 350 (step 415). The GSM Internet Gateway 310a converts the GSM identity message 315 into Internet Protocol (IP) packets 335 containing the identity message 315 and location information 318, and routes the IP packets 335 through an Internet 330 to the Internet Gatekeeper 320 for the area that includes the GSM MSC 14a. This identity message 315 preferably inquires whether there are any other types of wireless systems nearby that the call can be handed over to. Alternatively, the GSM MSC 14a may have knowledge about the existence of another type of system nearby, and the identity message 315 may seek confirmation of the existence of the other type of system from the Internet Gatekeeper 320.

Keski-Heikkilä teaches a permanent Cell ID (see C4, L39-46) which can be viewed as a "common" Cell ID format. Hence, the applicant uses one network's structure to represent the Cell ID while Keski-Heikkilä uses a method whereby his "permanent" format can be used in a similar manner, eg. sending the mobile the permanent Cell ID. Furthermore, Keski-Heikkilä teaches generically modifying the Cell ID format/structure which broadly reads on the applicant's broad claims.

It would have been obvious to one skilled in the art at the time of the invention to modify Ray, such using a cell identity information structure of a second telecommunication network, to provide means for using an "alternate" Cell ID to make the mobile think that a listing in the neighbor list is from the same network they are operating on currently and that they can connect to it.

As per **claims 32 and 47**, Ray teaches claim 31/42, wherein the apparatus is a network element (Figure 1, shows an HLR #26 and VLR #16 which are network components/elements).

As per **claim 33**, Ray teaches 33. (New) The apparatus as claimed in claim 31, wherein the data store is a database (Figure 1, shows an HLR #26 and VLR #16 which are databases),

As per **claims 35, 45 and 58**, Ray teaches claim 35/42/55, wherein the second telecommunication network is GSM network (Abstract teaches GSM network(s)).

As per **claims 36, 46 and 59**: The prior art does not teach, Ray teaches claim 31/42/55, wherein the cell identity information of the second telecommunication network comprises at least one of frequency, base station identification, or location area.

As per **claim 38**, Ray teaches 38. (New) The apparatus as claimed in claim 31, wherein the apparatus further comprises a handover algorithm which provides seamless mobility between the first telecommunication network and second telecommunication network (Abstract teaches handover).

As per **claim 40**, Ray teaches claim 38 wherein the seamless mobility is provided when a mobile station is either in IDLE or Active mode (Abstract teaches the mobile is roaming and connected in a call, which is Active mode. The examiner notes that Idle-mode handoffs are well known as well).

As per **claim 43**, Ray teaches claim 42, wherein the module is arranged to:  
receive signal strength information of the cells; and  
determine the need for changing serving cells on the basis of the signal strength information (C3, L45-46 teaches "collecting measurements" which are signal strength measurements and are inherent to cellular handoffs).

As per **claim 50**, Ray teaches claim 49, further comprising storing the cell information in a neighbor list of neighboring cells of the second telecommunication network (neighbor lists are inherent to cellular networks and Official Notice is taken).

As per **claim 56**, Ray teaches claim claim 55, further comprising means of measuring of signal level of radio transmitters in the first telecommunication network and the second telecommunication network (C3, L45-46 teaches "collecting measurements" which are signal level measurements).

As per **claim 60**, Ray teaches claim 55, wherein the mobile station has means for transmitting the signal level to at least one of the first telecommunication network and the second telecommunication network (C3, L45-46 teaches both the MS or BTS taking measurements. MAHO handoffs are well known and the mobile takes measurements and send them to the network).

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***Allowable Subject Matter***

**Claims 34, 37, 39, 41, 44, 48, 51-54, 57 and 61-63** objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

As per **claims 34, 44 and 57**: The prior art does not teach "wherein the first telecommunications network is one of a WLAN network, a Bluetooth network, or a WCDMA network".

As per **claim 37**: The prior art does not teach "the apparatus further comprises radio transceivers for transmitting the cell information".

As per **claim 39**: The prior art does not teach “the apparatus further comprises means for receiving information regarding a signal level of a serving cell and a neighbor cell”.

As per **claim 41**: The prior art does not teach “wherein the apparatus is an access point”

As per **claim 48**: The prior art does not teach “wherein the handover module has been implemented in a mobile station”.

As per **claim 51**: The prior art does not teach “wherein the transmitting is done in a cell of the second telecommunication network”.

As per **claim 52**: The prior art does not teach “wherein cell identity information of the cell of the first telecommunication network includes neighbor information given by the cell of the second telecommunication network”.

As per **claim 53**: The prior art does not teach “receiving by the mobile station the cell identity information; measuring by the mobile station an RX-level of cells; and transmitting by the mobile station the measurement results to at least one of the first telecommunication network and the second telecommunications network”.

As per **claim 54**: The prior art does not teach “modifying, by the mobile station, the transmitted measurement result to force the serving cell to be changed”.

As per **claim 61**: The prior art does not teach “wherein the mobile station has means for modifying a measurement result to force the network to change the serving cell”.

As per **claim 62**: The prior art does not teach “wherein the means for receiving a cell identity information for a cell of the first telecommunication network are adapted to receive the identity information from the second telecommunication network”.

As per **claim 63**: The prior art does not teach “wherein the means for receiving a cell identity information for a cell of the first telecommunication network are adapted to receive the identity information as a part of neighbor information of the cell of the second network”.

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***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. D'Agosta whose telephone number is 571-272-7862. The examiner can normally be reached on M-F, 8am to 5pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bill Trost can be reached on 571-272-7872. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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STEVE M. D'AGOSTA  
PRIMARY EXAMINER

*[Handwritten signature]*  
4-8-06